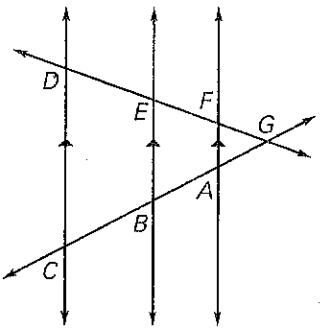
Name Key Date

LESSON 6.6

Practice C

For use with pages 396–403

Use the figure to complete the proportion.



1. $\frac{EF}{FG} = \frac{BA}{?}$ AG

2. $\frac{CB}{BA} = \frac{?}{EF}$ DE

3. $\frac{EB}{FA} = \frac{?}{FG}$ EG

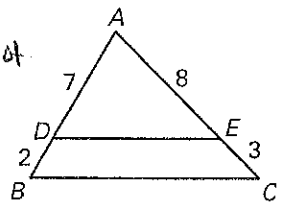
4. $\frac{EG}{ED} = \frac{?}{CB}$ BG

5. $\frac{DC}{FA} = \frac{?}{AG}$ CG

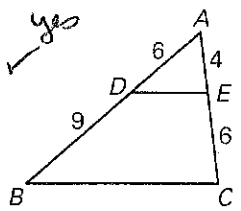
6. $\frac{GF}{FA} = \frac{GD}{?}$ DC

Determine whether the given information implies $\overline{BC} \parallel \overline{DE}$. *Explain.*

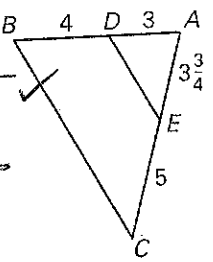
7. $\frac{7}{2} \neq \frac{8}{3}$ Not



8. $\frac{6}{9} = \frac{4}{6}$ ✓ yes



9. $\frac{3}{4} = \frac{3\frac{3}{4}}{5}$ ✓ yes

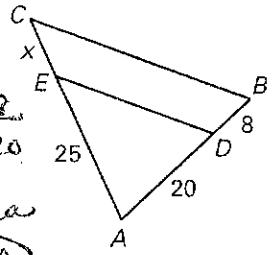


Determine a value of the variable so that $\overline{DE} \parallel \overline{BC}$.

10. $\frac{x}{25} = \frac{8}{20}$

$20x = 200$

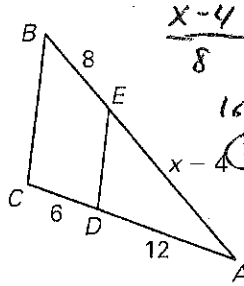
$x = 10$



11. $\frac{x-4}{8} = \frac{12}{6}$

$16 = x - 4$

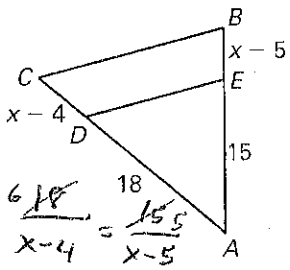
$20 = x$



12. $\frac{6}{x-4} = \frac{18}{x-5}$

$6x - 30 = 5x - 20$

$x = 10$



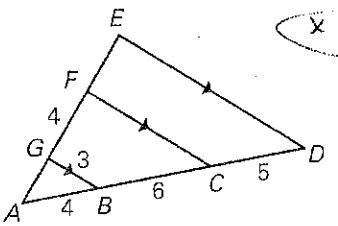
Determine the length of each segment.

13. $\overline{AG}$ $\frac{AG}{4} = \frac{4.2}{6}$ (÷3) $\frac{AG}{4} = \frac{1.4}{2}$

14. $\overline{FC}$ $\frac{10.5}{FC} = \frac{4}{3}$ $FC = 7.5$

15. $\overline{ED}$ $\frac{4}{15} = \frac{3}{ED}$ $ED = 11.25$

16. $\overline{AE}$ $\frac{AE}{4} = \frac{15}{6}$ $AE = 10$



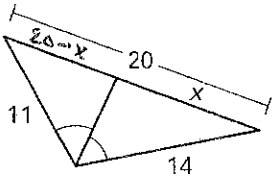
Find the value of the variable.

17. $\frac{11}{20-x} = \frac{14}{x}$

$11x = 280 - 14x$

$25x = 280$

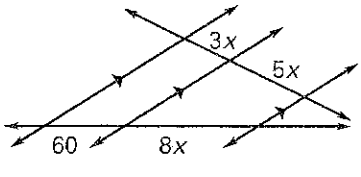
$x = 11.2$



18. $\frac{5x}{3x} = \frac{8x}{60}$ $\frac{2x}{15}$

$6x = 75$

$x = 12.5$

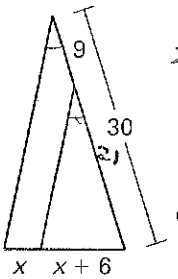


19. $\frac{x}{x+6} = \frac{9}{21}$ $\frac{3}{7}$

$7x = 3x + 18$

$4x = 18$

$x = 4.5$



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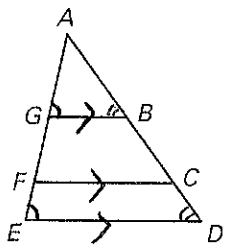
LESSON 6.6 **Practice C** *continued*
For use with pages 396–403

20. **Proof** Write a two-column or paragraph proof.

GIVEN: $\overline{GB} \parallel \overline{FC} \parallel \overline{ED}$

PROVE: $\triangle ABG \sim \triangle ADE$

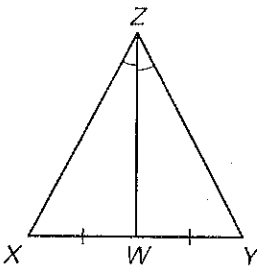


S	R
① ~	① Given
② $\overline{GB} \parallel \overline{ED}$	② Transitive Prop of $\parallel$ lines
③ $\angle AGB \cong \angle E$ · $\angle ABG \cong \angle D$	③ Corr $\angle$s Post
④ $\triangle ABG \sim \triangle ADE$	④ AA~

21. **Proof** Write a two-column or paragraph proof.

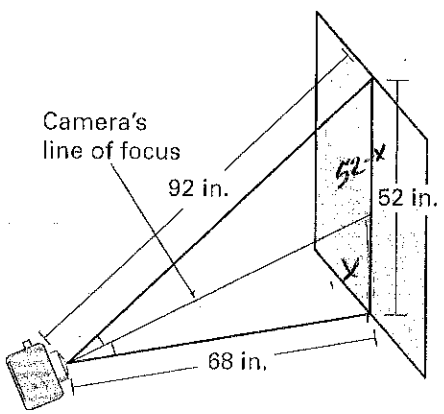
GIVEN: $\overline{WZ}$ bisects $\angle XZY$.

PROVE: $XZ = ZY$



S	R
① ~	① Given
②	②
③ $XW = WY$	③ Given
④ $\frac{XW}{XZ} = \frac{WY}{ZY}$	④ Thm 6.7
⑤ $(XW)(ZY) = (XZ)(WY)$	⑤ Cross Mult.
⑥ ~~XW~~ $ZY = XZ$	⑥ DIVISION
⑦ $XZ = ZY$	⑦ Symmetric

22. **Photography** You take a picture of a painting at an art gallery. The painting is above eye level, and you frame the painting so the top and bottom match up with the top and bottom of your view finder. Your camera's auto-focus feature focuses at the height of the angle bisector shown in the diagram. How far from the bottom of the painting is the focus?



$$\frac{x}{68} = \frac{52 - x}{92}$$

$$3536 - 68x = 92x$$

$$3536 = 160x$$

$$22.1 = x$$

22.1 in